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Dean

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(54) **FIREWORKS SAFETY IGNITER**

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(51) **Int. Cl.**

F42B 4/00	(2006.01)
F23Q 7/16	(2006.01)
F42C 19/12	(2006.01)

(52) **U.S. Cl.**

CPC . ***F42B 4/00*** (2013.01); ***F23Q 7/16*** (2013.01); *F42C 19/12* (2013.01)

(58) **Field of Classification Search**

CPC F42C 19/12; F42B 4/00; F23Q 7/14; F23Q 7/16
USPC 102/206, 361, 200, 202.14
See application file for complete search history.

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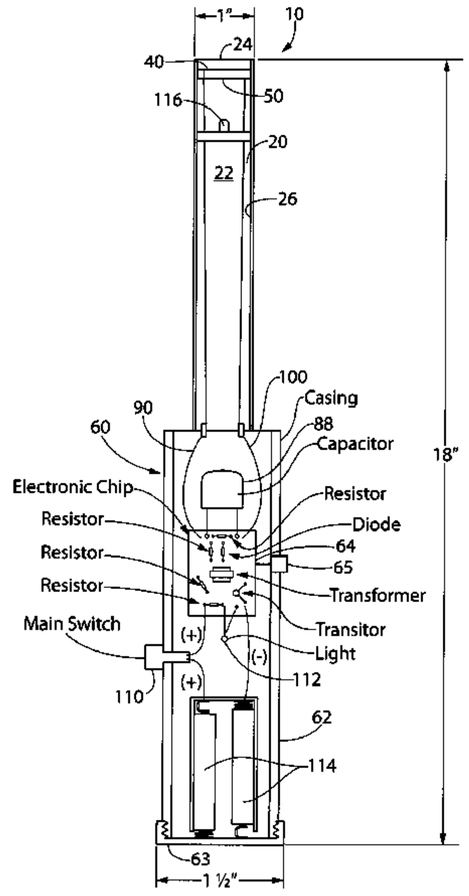
(57) **ABSTRACT**

A firework safety igniting device includes a housing having a hollow interior and an open end, the open end sized to receive a firework fuse therethrough; A first electrode is mounted within the hollow interior on an interior surface of the housing. A second electrode is also mounted within the hollow interior on the interior surface in a spaced apart relationship with the first electrode. A source is provided to generate and supply, through wires, an electric charge to the first and second electrodes, whereby the first electrode is being negatively charged and the second electrode is being positively charged. The firework fuse, being inserted into the hollow interior through the open end, is positioned in a contact with the first and second electrodes, the contact transferring the electric charge to the firework fuse causing an ignition thereof.

19 Claims, 4 Drawing Sheets



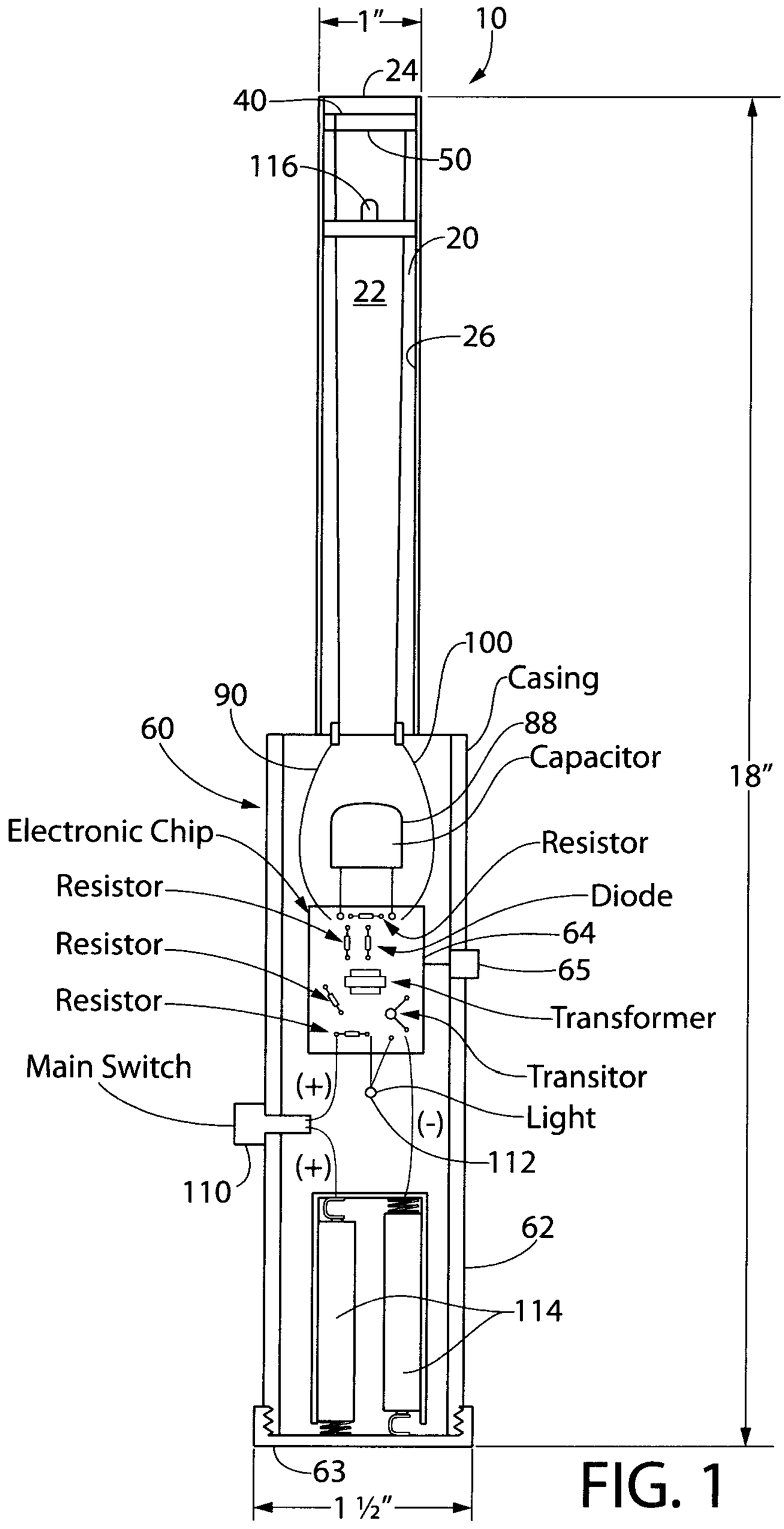

1"
10
24
40
116
50
20
22
26
100
Casing
90
88
60
Capacitor
18"
Electronic Chip
Resistor
Resistor
Diode
Resistor
64
65
Resistor
Transformer
Main Switch
(+)
Transitor
(-)
Light
112
(+)
110
62
114
63
1 ½"

FIG. 1

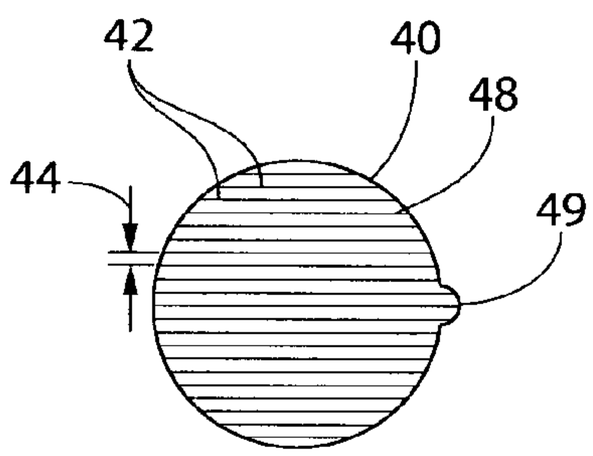


FIG. 2

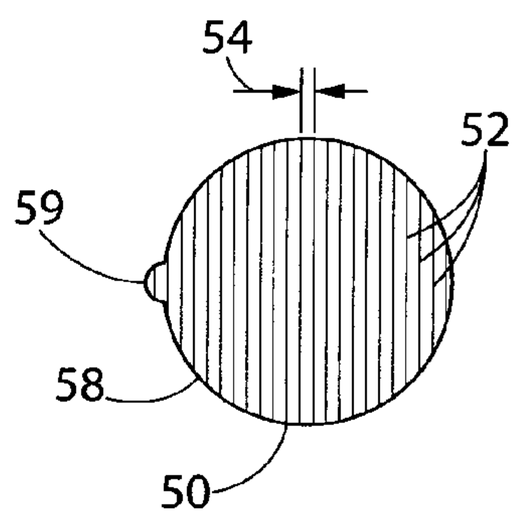


FIG. 3

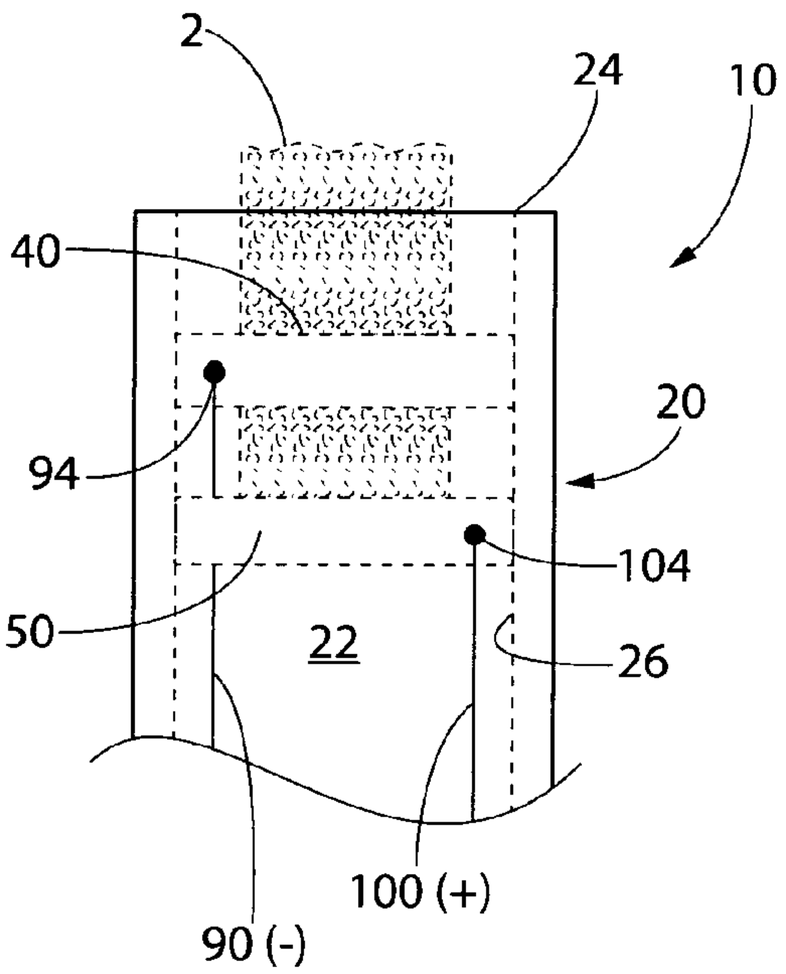


FIG. 4

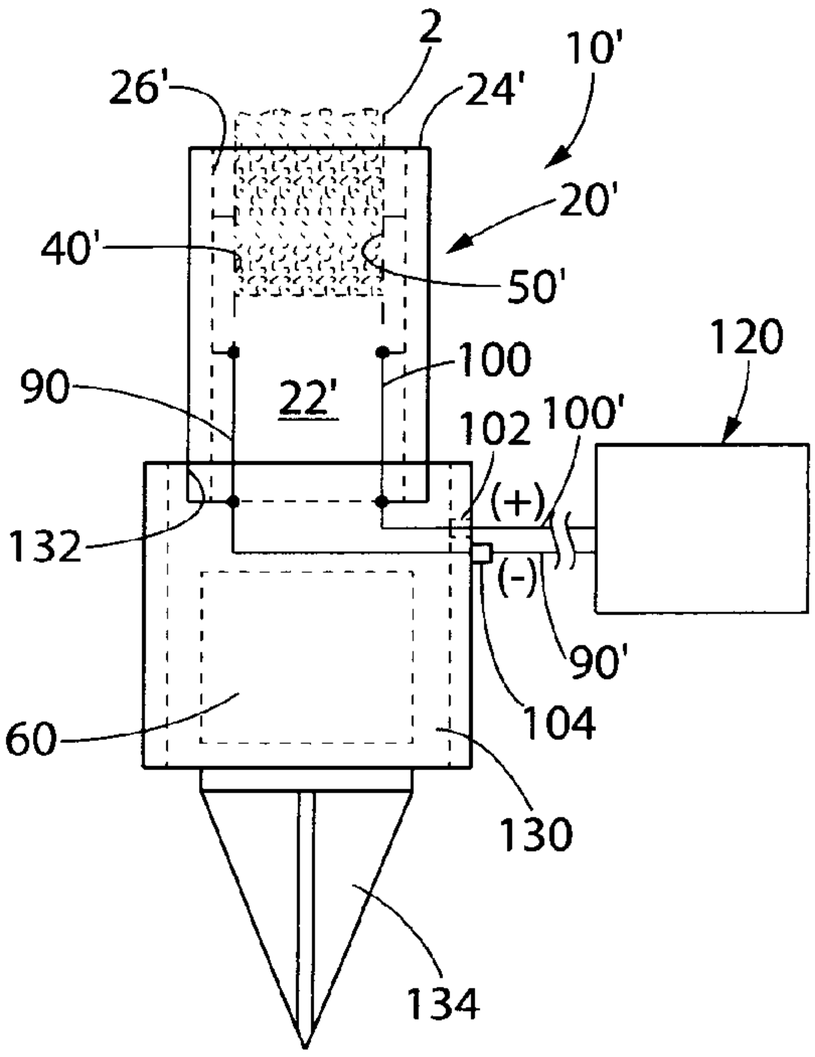


FIG. 5

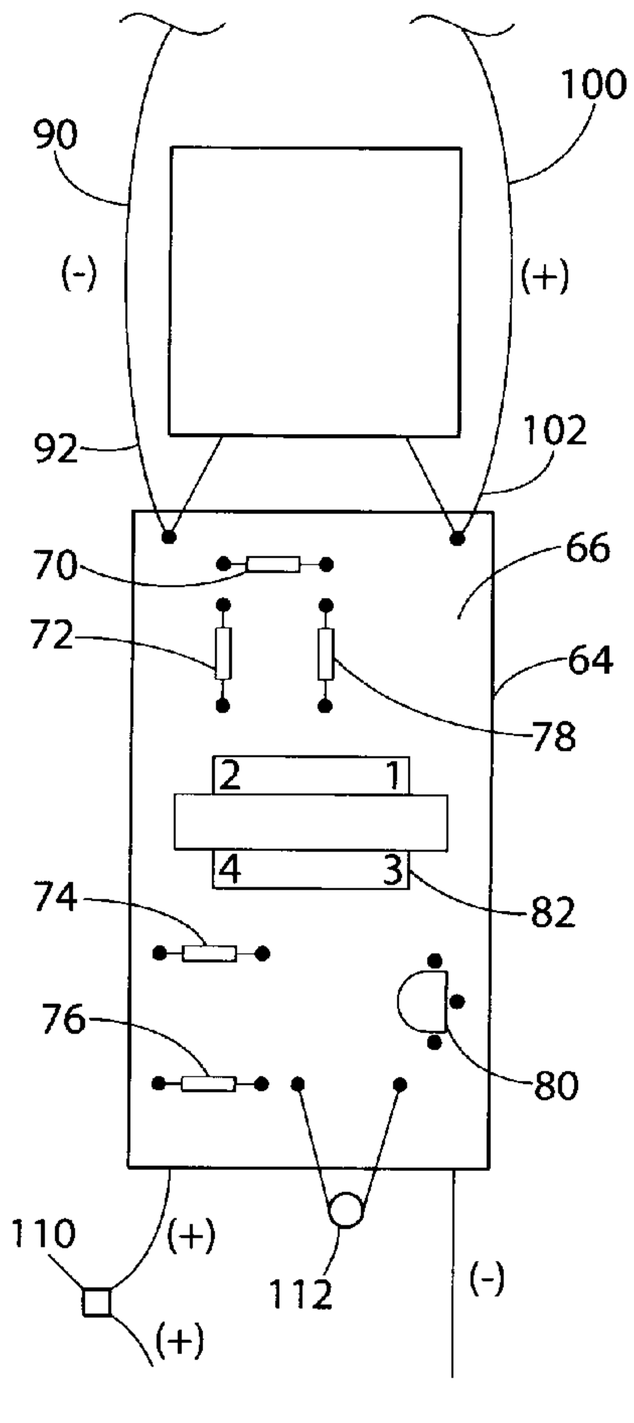

100
90
(-)
(+)
92
102
70
66
72
64
78
2
1
4
3
82
74
76
80
110
(+)
112
(-)
(+)

FIG. 6

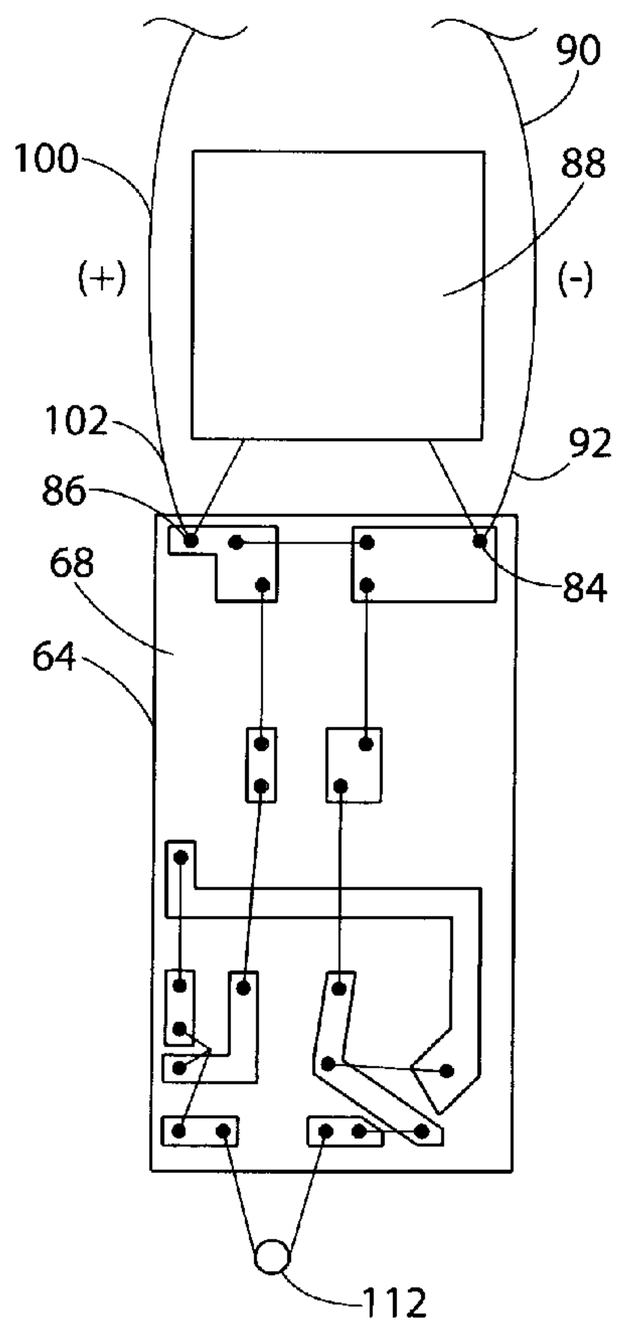

90
100
88
(+)
(-)
102
92
86
84
68
64
112

FIG. 7

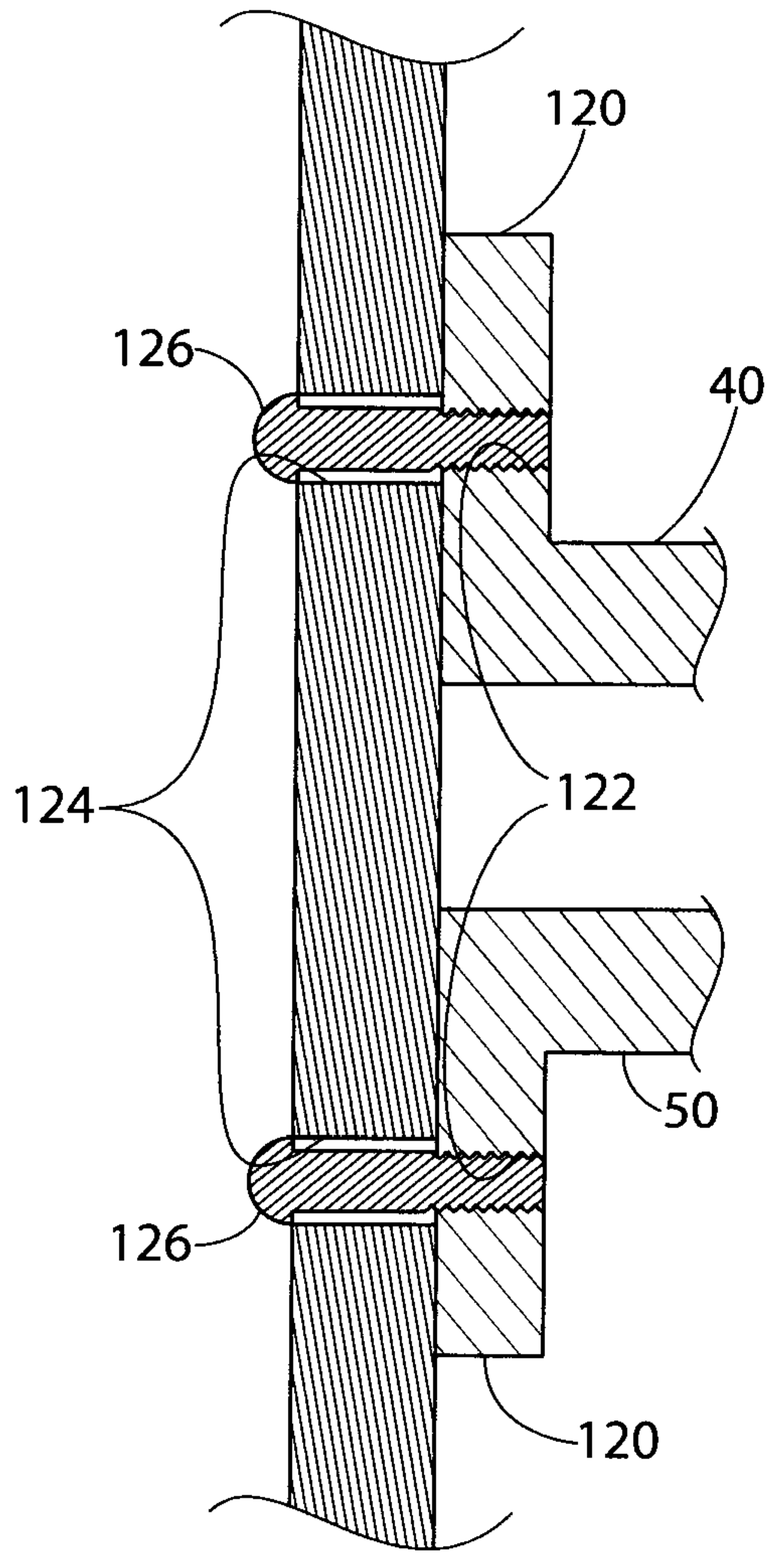


FIG. 8

FIREWORKS SAFETY IGNITER

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is related to and claims priority from U.S. Provisional Patent Application Ser. No. 61/992,955 filed on May 14, 2014.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT

N/A

REFERENCE TO SEQUENCE LISTING, A TABLE, OR A COMPUTER PROGRAM LISTING COMPACT DISC APPENDIX

N/A

BACKGROUND OF THE INVENTION

1. Technical Field

The subject matter relates to igniters. It further relates to an electrically operable fireworks igniter that is safe to use.

2. Description of Related Art

The following background information may present examples of specific aspects of the prior art (e.g., without limitation, approaches, facts, or common wisdom) that, while expected to be helpful to further educate the reader as to additional aspects of the prior art, is not to be construed as limiting the present invention, or any embodiments thereof, to anything stated or implied therein or inferred thereupon.

As is generally known, firecrackers and other fireworks commonly include a fuse and a casing which houses the charge. The firework may be set on, the ground and the fuse is lit with a lighter, matches or a punk. Each of these methods of lighting the fuse may be inherently dangerous. Sparks emitted from the fuse may burn the user. Lighters and matches present an open flame which may ignite other combustibles or burn the user, and the lighter and matches remain hot immediately after use. A punk, although safer than a lighter and matches, is always burning and may burn the user or inadvertently ignite other fireworks.

To the best knowledge of the Inventor, existing firework igniting devices are either ineffective in use or costly to manufacture.

Therefore, there is a need for an improved device for safely lighting the fuse of the firework.

BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings are incorporated in and constitute part of the specification and illustrate various embodiments. In the drawings:

FIG. **1** illustrates a longitudinal diagrammatic view of an exemplary igniting device for safely igniting a firework fuse;

FIG. **2** is planar view of one electrode employed within the exemplary igniting device of FIG. **1**;

FIG. **3** is planar view of another electrode employed within the exemplary igniting device of FIG. **1**;

FIG. **4** is a partial enlarged view of the firework fuse igniting device of FIG. **1**;

FIG. **5** is a partial enlarged view of another exemplary firework fuse igniting device;

FIG. **6** is a top diagrammatic view of an exemplary control circuit employed within or with the firework fuse igniting device of FIG. **1** or **5**;

FIG. **7** is a bottom diagrammatic view of the control circuit of FIG. **6**; and

FIG. **8** illustrates an exemplary attachment of the electrodes employed within the firework fuse igniting device of FIG. **1**.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Prior to proceeding to the more detailed description of the present invention, it should be noted that, for the sake of clarity and understanding, identical components which have identical functions have been identified with identical reference numerals throughout the several views illustrated in the drawing figures.

The following detailed description is merely exemplary in nature and is not intended to limit the described examples or the application and uses of the described examples. As used herein, the words "example", "exemplary" or "illustrative" means "serving as an example, instance, or illustration." Any implementation described herein as "example", "exemplary" or "illustrative" is not necessarily to be construed as preferred or advantageous over other implementations. All of the implementations described below are exemplary implementations provided to enable persons skilled in the art to make or use the embodiments of the disclosure and are not intended to limit the scope of the disclosure, which is defined by the claims. For purposes of description herein, the terms "upper," "lower," "left," "rear," "right," "front," "vertical," "horizontal," "exterior," "interior," and derivatives thereof shall relate to the invention as oriented in the Figures. Furthermore, there is no intention to be bound by any expressed or implied theory presented in the preceding technical field, background, or the following detailed description. It is also to be understood that the specific devices and processes illustrated in the attached drawings, and described in the following specification, are simply examples of the inventive concepts defined in the appended claims. Hence, specific dimensions and other physical characteristics relating to the examples disclosed herein are not to be considered as limiting, unless the claims expressly state otherwise.

The terms and words used in the following description and claims are not limited to the bibliographical meanings, but, are merely used by the inventor to enable a clear and consistent understanding of the invention. Accordingly, it should be apparent to those skilled in the art that the following description of exemplary embodiments of the present invention are provided for illustration purpose only and not for the purpose of limiting the invention as defined by the appended claims and their equivalents.

It is to be understood that the singular forms "a," "an," and "the" include plural referents unless the context clearly dictates otherwise. Thus, for example, reference to "a surface" includes reference to one or more of such surfaces.

The particular embodiments of the present disclosure generally provide a device, or an article of manufacture, directed to ignition of firework fuses, preferably in a safe manner.

In particular embodiments, the device for safely igniting firework fuses is battery operated.

In particular embodiments, device for safely igniting a firework is configured for a remote operation.

In particular embodiments, device for safely igniting a firework is configured for a hand-held operation.

Now in reference to FIGS. **1-4**, and in accordance with one exemplary embodiment, therein is provided a firework safety igniting device **10** operable to ignite a firework fuse **2**. The device comprises a housing **20** having a hollow interior **22**, an open end **24**, and an interior wall surface **26**. The open end **24** is sized to receive the firework fuse **2** therethrough. In one example, the cross-sectional shape of the housing **20** in a direction normal to a length thereof is an annular wall to operatively receive firework fuse **2** of a conventionally round cross-sectional shape. However, other cross-sectional shapes are contemplated to accommodate different cross-sectional shapes of the firework fuse **2**. For the reasons to be explained below, the housing **20** is manufactured, either completely or partially, from an electrically conductive material.

A first electrode **40**, shown in more details in FIG. **2**, is mounted within the hollow interior **22** normal to a longitudinal axis **12** of the device **10** and at a distance from the open end **24** of the housing **20**. The first electrode **40** includes wires **42** disposed parallel to each other and being oriented in a first direction. Adjacent wires **42** are spaced from each other at a first distance **44**. The wires **42** may be terminated by an annular member **48**, when the firework fuse **2** is provided with a round cross-section, for example for ease of subsequent assembly into the device **10**. A ground projection **49** is disposed on the annular member **48**. During assembly, the ground projection **49** is mounted to abut the interior wall surface **26** so as to ground the first electrode **40** to the housing **20**. The housing **20** does not have to be manufactured completely from a metal so as to enable grounding and may, for example, be manufactured from an electrically non-conductive material and include a metallic insert (not shown) providing electric grounding.

A second electrode **50**, shown in more details in FIG. **3**, is also mounted within the hollow interior **22** normal to the longitudinal axis of the housing **20** and at a distance from the first electrode **40**. The second electrode **50** includes wires **52** disposed parallel to each other and being oriented in a second direction. Adjacent wires **52** are spaced from each other at a second distance **54**. The wires **52** may be terminated by an annular member **58**. A ground projection **59** is disposed on the annular member **58**. During assembly, the ground projection **59** is mounted to abut the interior wall surface **26** so as to ground the second electrode **50** to the housing **20**. The second distance **54** is smaller than the first distance **44**. The second direction of wires **52** is shown in FIG. **3** as being perpendicular to the first direction of wires **42** but may be oriented at other angles.

Wires **42** and **52** are manufactured from electrically conductive material, for example such as copper, steel or the like. Parallel arrangement of wires **42** and/or **52** may be replaced with a grid-like pattern. Furthermore, the inner electrode, being shown as the second electrode **50** may be provided in a solid form, rather than wire form.

Both the first electrode **40** and the second electrode **50** are secured within the hollow interior **22** in a manner that prevents longitudinal movement thereof. In one example, the housing **20** may be manufactured from two halves with the first electrode **40** and the second electrode **50** being permanently secured, for example by welding, to an inner wall surface of one half. In another example, the first electrode **40** and the second electrode **50** may be secured at their respective ground projections **49** and **59**. In another example, the first electrode **40** and the second electrode **50** may be slightly compressed during the assembly so as to be held by friction sufficient to prevent movement thereof during repetitive insertion of the firework fuse **2**. In yet another example of FIG. **8**, each of the first and second electrodes, **40** and **50** respectively, may be provided with a flange **120** having a threaded aperture **122** formed through a thickness thereof and aligned with an aperture **124** through the wall of the housing **20** so as to operatively mate with a fastener **126**. In any of the above examples, the first and second electrodes, **40** and **50** respectively, may be assembled with an aid of a positioning tool or a fixture (not shown) configured to temporarily hold each electrode during installation.

In order to ignite the firework fuse **2**, an electric charge is applied to the first and second electrodes, **40** and **50** respectively.

In operation, an end of the firework fuse **2**, being manually inserted into the hollow interior **22** through the open end **24**, is manually forced to pass through the wires **42** in the first electrode **40**, in a contact therewith, for a subsequent contact with the wires **52** of the second electrode **50**, as is best shown in FIG. **4**. The pattern of first wires **42** is configured to cut into a generally soft material of the firework fuse **2**. The contact of the firework fuse **2** with wires in the first and second electrodes, **40** and **50** respectively, transfers the electric charge from the activated circuit **60** to the firework fuse **2** causing an ignition thereof. The inset of the first electrode **40** from the open end **24** allows for a temporary retention of the firework fuse **2** in a hands-free manner. In other words, the housing **20** is configured to temporarily hold or retain the firework fuse **2** without further manual help from the user of the device **10**. The length of the device **10** is so selected that, during such operation, the user does not have to be in a close proximity to the firework fuse **2**, thus obviating most if not all safety issues and/or concerns.

In a further reference to FIG. **1** and in a reference to FIGS. **6-7**, therein is illustrated a source of the electric charge in accordance with one exemplary embodiment, which is a circuit or circuit assembly **60** that is configured and operable to generate the electric charge and supply it to the first and second electrodes, **40** and **50** respectively.

The circuit **60** may include a board **64** having a first surface **66** and an opposite surface **68**. Disposed on one surface, such as the first surface **64**, are resistors **72**, **74**, and **76**, diode **78**, transistor **80** and transformer **82**, converting AC voltage into DC voltage. The second surface **66** contains circuit of traces and/or physical electrical connection between the above referenced components. The circuit **60** also includes two connections **84** and **86** to which capacitor **88** is connected. The capacitor **88** provides a DC charge to the electrodes **40** and **50** sufficient to ignite the firework fuse **2**. Such charge may be, for example, of about 400 VDC.

Also, the device **10** includes a first wire **90** that has a first end **92** thereof connected the connection **84**. The second end **94** of the wire **90** is connected to the first electrode **40**. The device **10** also includes a second wire **100** that has a first end **102** thereof connected the connection **86**. The second end **104** of the second wire **100** is connected to the second electrode **50**. The connection may be so configured that the first electrode **40** is negatively charged and the second electrode **50** is positively charged, although the polarity of the electrodes can be reversed

In operation, the first and second wires, **90** and **100** respectively supply the electric charge generated by the circuit **60** and, more particularly by the capacitor **88**.

In a further reference to FIGS. **6-7**, the exemplary circuit **60** is disposed within another hollow housing **62**. The

housing **62** may be made integral with the housing **60** or may be securely attached thereto by any conventional techniques, including but not limited to welding, bonding, mechanical crimping and the like. It would be understood that in these forms the hollow housing **62** becomes an extension of the housing **20** and may further function as a handle, thus configuring the device **10** for a hand-held use during ignition of the firework fuse **2**.

Still in a further reference to FIGS. **6-7**, the device **10** may include a power switch **110** coupled to the circuit board **62** that is manually operable by the user to trigger the circuit **60** in order to generate the electric charge. The device **10** may also include an optional light indicator **112**, for example such as an LED device, coupled to the circuit **60** so as to visually annunciate operability of the circuit **60**. The light indicator **112** made be connected to the circuit **60** either to be lit continuously while there is a supply of electric energy to the circuit **60** or be lit only when the power switch **110** is operated to connect supply of electric energy to the circuit **60**, thus activating the circuit **60**.

The device **10** and, more particularly the circuit **60**, is coupled to a supply source of electric energy so as to apply electric charge to the first and second electrodes, **40** and **50** respectively

In one example, in further reference to FIG. **1**, when the device **10** includes the circuit **60**, the device **10** may also include one or more batteries **114** that may be disposed within the hollow interior of the housing **62**. When provided, the one or more batteries **114** are coupled to the switch **110** and to the circuit **60**. Thus, essentially, the switch **110** is manually operable to selectively supply the electric energy to the circuit **60** and, more particularly, to the electrodes **40** and **50**. Although the one or more batteries **114** are illustrated in FIG. **1** as an elongated batteries, for example such as AA or AAA batteries, they also may be of a round, pancake-like shape.

The housing **62** may be adapted to receive an end cap **63** in any of the conventional manners, not being critical to the instant invention, so as to allow selective access to the one or more batteries **114**.

It is further contemplated herewithin that the end cap **63** can be replaced with a conventional cover (not shown) mounted along at least a portion of a length of the housing **62** and even that the housing **62** can be manufactured in two halves that are releaseably or permanently joined together by any conventional means.

In another example, the source of the electric charge may be disposed remotely from the circuit **60**, wherein the circuit **60** can be adapted for a direct or an indirect connection to a remotely positioned power source, for example such as a conventional outlet. In this example, when the circuit **60** is disposed within the housing **62**, the device **10** may be adapted with a connector **65** accessible from the exterior surface of the housing **62** and being electrically coupled to the circuit **60**.

Now in reference to FIG. **5**, therein is illustrated another exemplary embodiment of a firework safety igniting device, generally designated as **10'**, wherein a first electrode **40'**, for example such as a strip of an electrically conductive material, is mounted within the hollow interior **22'** on an interior surface **26'** of the housing **20'** and a second electrode **50'** for example such as the strip of an electrically conductive material, is also mounted within the hollow interior **22'** on the interior surface **26'** opposite or adjacent the first electrode **40'**. In either form, the electrodes **40'** and **50'** are so positioned and are spaced apart with each other so that the firework fuse **2**, being inserted into the open end **24'**, contacts both electrodes **40'** and **50'**, whereby the contact of the firework fuse **2** with the first and second electrodes, **40** and **50** respectively, transfers the electric charge to the firework fuse **2**, causing an ignition thereof. The electrodes **40'**, **50'** may be secured, in an electrically conducting manner, to the interior surface **26'** of the housing **20'** with adhesive, fasteners, or by a welding method

In another exemplary embodiment, the circuit **60** may be disposed remotely from the housing **20**, **20'**. The circuit **60** may be then contained within a remote ignition device **120**. When the device **10**, **10'** is configured for a remote ignition, the wires **90'** and **100'** are then extended past an exterior surface of the housing **20**, **20'** and are adapted to connect the first and second electrodes, **40'** and **50'** respectively, to the remote ignition device **120**. In this exemplary embodiment, the wires **90'** and **100'** may be passed through apertures **102** in the housing wall becoming wires **90** and **100** or the housing **20**, **20'** may have additional electrical connection(s) **104**, for example such as an electrical connector, accessible from the exterior surface of the housing wall for a releaseable coupling of the wires **90'** and **100'** to respective wires **90** and **100**.

Furthermore, in yet another exemplary embodiment of FIG. **5**, therein is provided a holder **130** having a cavity **132** sized to receive the exterior peripheral surface of the housing **20**, **20'** and having an end **134** configured to support the device **10** or **10'** in a vertical direction above a ground surface. By way of one example only, the end **134** is illustrated as a conventional ground stake to mount the device **10** or **10'** above ground. Such holder **130** may be used adjacent a firework mount when the firework fuse **2** is of a sufficient length to reach the holder **130**. Such holder **130**, particularly without the stake-shaped end **134** is sufficiently light to be suspended on the firework fuse **2**.

The circuit **60**, with or without one or more batteries **114**, may be disposed remotely from the holder **130**, as is shown in FIG. **5**, or may be disposed within the interior of the holder **130**.

In some of the various exemplary embodiments, the device **10**, **10'** may include an optional light indicator **116**, such as an LED device, that may be mounted, internal, as is shown in FIG. **1**, or external to the housing **20**, in a connection with the circuit **60**, for example through the above described wires **90** and **100**, and in a position to illuminate the firework fuse **2**.

The method of safely igniting firework fuse **2** comprises the steps of providing a pair of electrodes; the step of positioning the electrodes, within a housing, in a spaced apart relationship with each other, the step of positioning the firework fuse **2** in a contact with both electrodes and the step of supplying, with a source, electric charge to the firework fuse **2** being in such contact with both electrodes. The steps of providing a pair of electrodes may include the step of configuring one electrode to allow passage of the firework fuse **2** therethrough. The step of supplying a charge of electric energy may include the step of providing the source as a circuit and the step of positioning the circuit within the housing or the step of positioning the circuit remotely from the housing. The above described method functions or operates as a method to position the user at a distance from the firework fuse **2** sufficient to obviate most if not all safety issues and/or concerns when igniting firework fuse **2**. The above described method functions or operates as a method for igniting the firework fuse **2** with a hand-held device.

The chosen exemplary embodiments of the claimed invention have been described and illustrated for practical purposes so as to enable any person skilled in the art to

which it pertains to make and use the same. It is therefore intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. It will be understood that variations, modifications, equivalents and substitutions for components of the specifically described exemplary embodiments of the invention may be made by those skilled in the art without departing from the spirit and scope of the invention as set forth in the appended claims. For example, the circuit **60** may be replaced with a solid-state device, for example such as an integrated circuit or a chip, configured and operable to supply the electric charge to the electrodes.

As used herein, the terms "adapted" and/or "configured" mean that the element, component, or other subject matter is designed and/or intended to perform a given function. Thus, the use of the terms "adapted" and/or "configured" should not be construed to mean that a given element, component, or other subject matter is simply "capable of" performing a given function but that the element, component, and/or other subject matter is specifically selected, created, implemented, utilized, programmed, and/or designed for the purpose of performing the function. It is also within the scope of the present disclosure that elements, components, and/or other recited subject matter that is recited as being adapted to perform a particular function may additionally or alternatively be described as being configured to perform that function, and vice versa. Similarly, subject matter that is recited as being configured to perform a particular function may additionally or alternatively be described as being operative to perform that function.

Any element in a claim that does not explicitly state "means for" Performing a specified function, or "step for" performing a specified function, is not to be interpreted as a "means" or "step" clause as specified in 35 U.S.C. §112, ¶6. In particular, any use of "step of" in the claims is not intended to invoke the provision of 35 U.S.C. §112, ¶6.

Furthermore, the Abstract is not intended to be limiting as to the scope of the claimed invention and is for the purpose of quickly determining the nature of the claimed invention.

What is claim is:

1. A firework safety igniting device comprising:

a housing having a hollow interior and an open end, said open end sized to receive a firework fuse therethrough;

a first electrode mounted within said hollow interior of said housing in a contact with an interior surface thereof, said first electrode being coupled to a source of an electric charge; and

a second electrode mounted within said hollow interior in a contact with said interior surface thereof, said second electrode being coupled to the source of electric charge, said second electrode being disposed in a spaced apart relationship with said first electrode such that the firework fuse, being inserted into said hollow interior through said open end, contacts said first and second electrodes, whereby said contact of the firework fuse with said first and second electrodes transfers said electric charge to the firework fuse causing an ignition thereof.

2. The firework safety igniting device of claim **1**, wherein each of said first and second electrodes includes wires disposed parallel to each other.

3. The firework safety igniting device of claim **2**, wherein wires in said second electrode are oriented in a different direction than wires in said first electrode.

4. The firework safety igniting device of claim **2**, wherein a spacing between adjacent wires in said first electrode is greater than a spacing between adjacent wires in said second electrode.

5. The firework safety igniting device of claim **1**, wherein said first electrode is being negatively charged during operation of said device, wherein said second electrode is being positively charged during operation of said device and wherein said first electrode is mounted closer to said open end.

6. The firework safety igniting device of claim **1**, wherein each of said first and second electrodes is mounted on said interior surface of said housing.

7. The firework safety igniting device of claim **1**, further comprising said source of said electric charge.

8. The firework safety igniting device of claim **7**, wherein said source of said electric charge includes:

a circuit board with an electrical connection circuit disposed on a surface thereof and having connection(s) to a source of electric energy;

a transformer mounted on said circuit board and;

at least one of a diode, resistor and transistor mounted on said circuit board coupled to said electrical connection circuit;

a capacitor coupled to said electrical connection circuit;

a first wire coupled at one end thereof to said electrical connection circuit and coupled at an opposite end thereof to one of said first and second electrodes; and

a second wire coupled at one end thereof to said electrical connection circuit and coupled at an opposite end thereof to another one of said first and second electrodes.

9. The firework safety igniting device of claim **8**, further comprising a light indicator coupled to said circuit board.

10. The firework safety igniting device of claim **8**, further comprising a switch coupled between said source of said electric charge and the source of electric energy and operable to selectively activate and deactivate said source of said electric charge.

11. The firework safety igniting device of claim **8**, further comprising one or more batteries electrically coupled to said source of said electric charge.

12. The firework safety igniting device of claim **7**, further including another housing connected to said housing and wherein said source of said electric charge is mounted within said another housing.

13. The firework safety igniting device of claim **7**, wherein said source of said electric charge is mounted remotely from said housing.

14. The firework safety igniting device of claim **1**, further comprising a light emitting source mounted within said hollow interior.

15. The firework safety igniting device of claim **1**, further comprising a mounting member configured to position said housing above a ground surface.

16. A firework safety igniting device comprising:

a housing having a hollow interior and an open end, said open end sized to receive a firework fuse therethrough, said housing is at least partially manufactured from an electrically conductive material;

a first electrode mounted, in an electrically grounded manner with said housing, within said hollow interior normal to a longitudinal axis of said device and at a distance from said open end thereof, said first electrode including wires disposed parallel to each other, being spaced from each other at a first distance and being oriented in a first direction;

a second electrode mounted, in said electrically grounded manner with said housing, within said hollow interior normal to said longitudinal axis of said housing and at a distance from said first electrode, said second electrode including wires disposed parallel to each other, being spaced from each other at a second distance and being oriented in a second direction, wherein said second distance is smaller than said first distance, and wherein said second direction is perpendicular to said first direction;

a source generating and supplying, through wires, an electric charge to said first and second electrodes, whereby said first electrode is being negatively charged and said second electrode is being positively charged;

whereby the firework fuse, being inserted into said hollow interior through said open end, passes said wires in said first electrode, in a contact therewith, for a further contact with said wires of said second electrode; and

whereby said contacts of the firework fuse with wires in said first and second electrodes transfers said electric charge to the firework fuse causing an ignition thereof.

17. The firework safety igniting device of claim **16**, wherein said source is disposed within said housing.

18. The firework safety igniting device of claim **16**, wherein said source is disposed external to said housing and wherein said wires extend past an exterior surface of said housing.

19. A firework safety igniting device comprising:

a housing having a hollow interior and an open end, said open end sized to receive a firework fuse therethrough;

a first electrode mounted within said hollow interior on an interior surface of said housing;

a second electrode mounted within said hollow interior on said interior surface in a spaced apart relationship with said first electrode;

a source generating and supplying, through wires, an electric charge to said first and second electrodes, whereby said first electrode is being negatively charged and said second electrode is being positively charged; and

wherein the firework fuse, being inserted into said hollow interior through said open end, is positioned in a contact with said first and second electrodes, said contact transferring said electric charge, generated and supplied by said source, to the firework fuse causing an ignition thereof.

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